

REMARKS

This is in response to the Office Action of March 26, 2004.

Status of the Application

Claims 1-50 were initially presented. In the Office Action of March 26, 2004, the Examiner rejected claims 1-50, and objected to claim 44. By way of this amendment, claims 1, 10, 31, 36, and 44 has been amended and claims 2, 11, 33, and 38 have been canceled. Accordingly, claims 1, 3-10, 12-32, 34-37, and 39-50 are now pending.

In view of above amendments and the following remarks, reconsideration of the application is respectfully requested.

Claim Objection

The Examiner objected to claim 44 asserting that the word "containing" should read "contain." In response, Applicants have amended claim 44, which depends from claim 41, to make its language consistent with that of claim 41. Applicants respectfully submit that the amendment of claim 44 is not a narrowing amendment.

Rejection Under 35 U.S.C. § 102(e)

Claims 31-40 were rejected under 35 U.S.C. §102(e) as being unpatentable over U.S. Patent No. 6,606,527 to de Andrade, Jr. et al. (de Andrade).

Claim 31

Claim 31 was rejected under 35 U.S.C. §102(e) as being unpatentable over de Andrade. Claim 31 has been amended to incorporate elements of claim 33. Claim 31, as amended, is allowable over de Andrade because de Andrade does not teach, disclose, or suggest all the elements of claim 31.

Claim 31 now recites "prompting the user to enter an input specifying a recipe change to the batch information." De Andrade does not teach, disclose, or suggest this element, among others.

De Andrade describes a system for generating production plans at various levels of detail for a manufacturing plant. For instance, a campaign planning system generates a production plan for each resource of a manufacturing plant with the granularity of an 8-hour shift. *See de Andrade* at col. 2, lines 52-54. Also, a detailed planning system generates a more detailed production plan within the bounds of the plan generated by the campaign planning system. *See id.* at col. 3, lines 43-46. It appears that the plan generated by the system of de Andrade is a resource allocation schedule for the manufacturing plant:

The solution generated must take into consideration all significant constraints so that the scheduling is as faithful as possible to reality.

Id. at col. 10, lines 26-28;

For each ingot ... the time is determined that the ingot or plate may wait between the end of ingoting and the start of charging for rolling.

Id. at col. 11, lines 25-28;

[T]his module must select the cells of the shaft furnaces available and assign them the ingots, making all possible time allowances."

Id. at col. 11, lines 44-47;

[T]he sequence with which they must be rolled is determined, taking into account the timing and configuration constraints of the rollers."

Id. at col. 11, lines 50-52.

De Andrade does not appear to teach anything about "prompting the user to enter an input specifying a recipe change to the batch information." As discussed above, de Andrade appears to be related to generating schedules for resources in a manufacturing plant. Thus, although de Andrade describes allowing a user to modify a "plan" (col. 4, lines 6-9), it appears that this merely refers to allowing a user to modify a schedule. The system of de Andrade does not appear to allow a user to make a recipe change. In fact, de Andrade does not even include the word "recipe."

The Office Action asserts that a portion of de Andrade that discusses an optimizer corresponds to disclosure of recipe information. *See Office Action* at p. 8. But this portion of

de Andrade appears to refer to a mathematical model used to determine how much of each product should be produced during a year in order to maximize profits. *See de Andrade* at col. 5, lines 29-35; col. 6 lines 37-48; col. 6, line 65 to col. 7, line 16. Thus, the "variables, parameters and constraints" that the Office Action asserts correspond to a recipe do not appear to relate to recipes. Rather, the "variables, parameters and constraints" appear to relate to the mathematical model. Thus, de Andrade does not appear to teach a system that allows a user to make a recipe change.

At least for this reason, claim 31 is allowable over de Andrade.

Rejections Under 35 U.S.C. § 103

Claims 1-2, 8, 10, 11, 17, 41-44, 47-48, and 50 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade. Claims 3 and 12 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of U.S. Patent No. 6,292,708 to Allen et al. (Allen). Claims 4 and 13 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of U.S. Patent No. 6,488,037 to Guldi (Guldi). Claims 5, 14, 19-23, 25-29, and 49 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of U.S. Patent No. 6,000,830 to Asano et al. (Asano). Claims 6 and 16 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of U.S. Patent No. 6,438,436 to Hohkibara et al. (Hohkibara). Claims 7, 9, 15, 18, 45, and 46 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of U.S. Patent No. 5,113,350 to Sargent (Sargent). Claims 24 and 30 were rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of Asano and in further view of Hohkibara.

Claim 1

Claim 1 was rejected under 35 U.S.C. §103 as being unpatentable over de Andrade. Claim 1 has been amended to incorporate elements of claim 2. Claim 1, as amended, is allowable over de Andrade because de Andrade does not teach, disclose, or suggest all the elements of claim 1.

Claim 1 now recites "receiving a second message containing a set of batch information in response to the first message requesting batch information, the set of batch

information including recipe information." De Andrade does not teach, disclose, or suggest this element, among others.

As discussed above, the system of de Andrade appears to be related to generating schedules for resources in a manufacturing plant. The system of de Andrade does not appear to create batch campaigns using recipe information. In fact, de Andrade does not even include the word "recipe." Further, the disclosure of de Andrade that the Office Action asserts is related to recipe information does not appear to be related at all to recipe information. Rather, that portion of de Andrade appears to be related to "variables, parameters and constraints" of a mathematical model used to determine how much of each product should be produced during a year in order to maximize profits. *See de Andrade* at col. 5, lines 29-35; col. 6 lines 37-48; col. 6, line 65 to col. 7, line 16.

At least for this reason, claim 1 is allowable over de Andrade.

Claim 41

Claim 41 was rejected under 35 U.S.C. §103 as being unpatentable over de Andrade. Claim 41 has been amended to incorporate an element of claim 42. Claim 41, as amended, is allowable over de Andrade because de Andrade does not teach, disclose, or suggest all the elements of claim 41.

Claim 41 now recites "a batch executive including a batch information database and a batch execution engine." De Andrade does not teach, disclose, or suggest this element, among others.

As discussed above, de Andrade describes a system for generating schedules for resources in a manufacturing plant. The system of de Andrade does not appear, however, to communicate with equipment in the manufacturing plant to cause process steps to actually be performed. Thus, de Andrade does not appear to teach anything about "a batch executive including a batch information database and a batch execution engine."

At least for this reason, claim 31 is allowable over de Andrade.

Claim 19

Claim 19 was rejected under 35 U.S.C. §103 as being unpatentable over de Andrade in view of Asano. Applicants respectfully traverse the rejection because de Andrade and

Asano do not disclose, teach, or suggest all the limitations of claim 19, neither individually nor in combination.

De Andrade does not teach, disclose, or suggest executing a batch process campaign. Nor does de Andrade teach, disclose, or suggest a process control system having a batch execution function. As discussed above, the system of de Andrade appears to relate to generating production plans for a manufacturing plant. The system of de Andrade does not appear to relate at all to executing batches. Thus, de Andrade does not teach anything about a batch execution function or batch execution modes.

Asano does not disclose, teach, or suggest a method for executing a batch process campaign. Rather, Asano describes a system for applying recipes to semiconductor manufacturing apparatuses. The system of Asano includes a host computer connected to a plurality of apparatus controllers, and a group controller connected to the host computer and the apparatus controllers.

The Office Action asserted that Asano discloses "determining a batch execution mode associated with the batch process campaign" because Asano describes a mode selector that selects between an apparatus mode, a recipe management mode, and a host mode. *See Office Action* at p. 14. These modes of Asano, however, appear to merely relate to where recipes are stored in the system (e.g., at the host computer, the group controller, or the apparatus controllers). *See Asano* at col. 5, lines 37-40; col. 6, lines 10-12 and 44-46. These modes do not appear to be related to how a batch is executed. Thus, Asano does not disclose, teach, or suggest "determining a batch execution mode associated with the batch process campaign."

Additionally, Asano does not disclose or suggest "releasing one or more batches from the plurality of batches to the batch execution function based on the batch execution mode." Rather, Asano merely describes modes that relate to where recipes are stored in the system (e.g., at the host computer, the group controller, or the apparatus controllers). *See Asano* at col. 5, lines 37-40; col. 6, lines 10-12 and 44-46.

Accordingly, Applicants respectfully submit that claim 19 is allowable over Asano and Allen.

Other Claims

Applicants respectfully submit that independent claim 10, as amended, is allowable at least for reasons similar to those discussed above with respect to claim 1.

It is respectfully submitted that independent claim 25 is allowable at least for reasons similar to those discussed above with respect to claim 19.

Applicants respectfully submit that independent claim 36, as amended, is allowable at least for reasons similar to those discussed above with respect to claim 31.

Claims 3-9 depend from claim 1. It is respectfully submitted that these claims are allowable at least for the same reasons as claim 1.

Claims 12-18 depend from claim 10. Applicants respectfully submit that these claims are allowable at least for the same reasons as claim 10.

Claims 20-24 depend from claim 19. It is respectfully submitted that these claims are allowable at least for the same reasons as claim 19.

Claims 26-30 depend from claim 25. Applicants respectfully submit that these claims are allowable at least for the same reasons as claim 25.

It is respectfully submitted that claims 32, 34, 35 and claims 37, 39, 40 are allowable at least for the same reasons as claims 31 and 36, respectively.

Applicants respectfully submit that claims 42-50 are allowable at least for the same reasons as claim 41.

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Conclusion

In view of the foregoing, it is respectfully submitted that the above application is in condition for allowance. If there is any matter that the Examiner would like to discuss, the Examiner is invited to contact the undersigned representative at the telephone number set forth below.

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Respectfully submitted,

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